

REMARKS

In view of the following remarks, reconsideration and allowance of this application is respectfully requested. Claims 1 and 3-17 are pending in this application. Claims 4-11 are allowed. Claims 1, 3 and 12-17 stand rejected. No new matter has been introduced.

Independent claims 1 and 17 and dependent claims 3, 12-13 and 15-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,959,027 (“Muzslay”) in view of U.S. Patent No. 5,605,475 (“Ogawa”). Applicants respectfully traverse the foregoing claim rejections for the reasons set forth hereinafter.

As set forth in detail in the present application and as described in previous submissions, Applicants’ invention is directed to a new pressure-tight contact device especially of the type employed in connection with a pressure-tight encapsulated electric motor for driving, for example, a compressor used in a vehicle air suspension system. The inventive contact device includes an insulator extending through and sealed relative to a pressure-tight housing. One or more contact pins (electrically connected to the motor, for example) are retained in and extend through the insulator and are sealed relative to the insulator. A connector shell is positioned on the insulator, sealed relative to the insulator, and affixed to the insulator or the housing. The connector shell includes a terminal receptacle or socket for engaging a separate mating connector attached to an electric connecting cable (i.e., a plug). One or more contact tabs are disposed in the connector shell in secure electrical contact with the contact pin(s) and extend into the terminal socket to engage the mating connector (plug).

The connector shell can be one of a set of interchangeable connector shells each having a different configuration for mating with a corresponding plug. In essence, the connector shell provides a pressure-tight, interchangeable contact assembly interposed between contact pin

(e.g., leading to the motor or other encapsulated device) and plug (e.g., leading to current supply lines or further signal lines) -- as explained below, such a novel construction and arrangement is not described or even suggested in any of the references cited by the Examiner in the Office Action.

Muzslay describes embodiments of a fuel injector adaptor (14) for mounting on a straight fuel injector (12) for use with a connector (16) designed for an inclined injector. The adapter includes a housing (40) with a lower housing part (42) that opens along a downward axis (44) and an upper housing part (46) that opens along an upwardly inclined axis (50). The inclined axis (50) is preferably 45° from vertical. A pair of bent plate-like contacts (52, 54) are mounted in the housing (40), with each contact having an upper part laying within the upper housing part (46) and extending along the inclined axis (50), and a lower contact part lying in the lower housing part (42) and extending perpendicular to the downward axis (44). The lower housing part (42) is permanently mounted on an upper end (30) of the straight fuel injector (12), with injector terminals (24, 26) projecting through holes in the contact lower parts to hold the contacts (52, 54) securely in position.

Applicants respectfully submit that Muzslay, taken alone or combined with any other reference cited by the Examiner, does not disclose or yield the present invention as claimed in independent claims 1 and 17. Muzslay nowhere teaches or suggests a connector shell being one of a set of interchangeable connector shells each having a different terminal socket configuration suitable for engaging a mating connector having a corresponding mating configuration. Indeed, it is submitted that Muzslay teaches away from interchangeable connector shells. Muzslay describes only a single configuration for mating the adapter with the connector. *See Fig. 3.* Moreover, Muzslay provides that the adapter is permanently held in place once it is

installed on the injector. *See* 1:37-40 (“The lower housing part is permanently mounted on the top end of an injector body, with the upstanding terminals of the injector projecting through the holes in the contact lower parts.”) (emphasis added); 4:3-4 (“It is highly desirable that once the adaptor is installed on an injector, that it be permanently held in place.”) (emphasis added).

Ogawa does not overcome the severe deficiencies of Muzslay as discussed above. Ogawa, cited by the Examiner in combination with Muzslay for its disclosure of an O-ring, describes embodiments of an electrical connector in threaded combination with a tube member used for making an electrical connection through a wall. Ogawa nowhere teaches or suggests the contact device according to the present invention as affirmatively claimed in independent claims 1 and 17 of the present application comprising the interchangeable connector shell with its plug receiving terminal socket including one or more contact tabs in electrical contact with one or more contact pins extending through the insulator.

Accordingly, independent claims 1 and 17 of the present application recite features and structure nowhere found in either of the Muzslay and Ogawa references, and, thus, these references, alone or in combination, cannot yield the present claimed invention. Furthermore, because Muzslay teaches away from interchangeable connector shells, it is submitted that one of ordinary skill in the art at the time of the invention would not be motivated, let alone equipped, to arrive at the present invention as claimed in independent claims 1 and 17 looking to Muzslay whether alone or combined with another reference, let alone Ogawa.

It is further submitted that dependent claims 3, 12-13 and 15-16 are also allowable by reason of their various dependencies from independent claim 1, as well as for the additional features and structure recited therein. Notice to this effect is earnestly requested.

Dependent claim 14 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Muzslay in view of Ogawa, and further in view of U.S. Patent No. 6,558,178 (“Nakamura”). Applicants respectfully traverse the foregoing claim rejection for the reasons set forth hereinafter.

Applicants respectfully submit that dependent claim 14 is allowable by reason of its dependency from independent claim 1, as well as for the additional features and structure recited therein. Notice to this effect is earnestly requested.

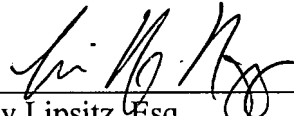
In addition, Nakamura does not remedy the severe deficiencies of Muzslay and Ogawa as discussed above. As previously submitted, Nakamura cited by the Examiner for its disclosure of a plurality of projections from at least one contact pin, describes embodiments of a waterproof connector having a small size due to the reduction of surplus space (see Fig. 9). Nakamura nowhere teaches or suggests the contact device according to the present invention comprising the interchangeable connector shell with its plug receiving terminal socket including one or more contact tabs in electrical contact with one or more contact pins extending through the insulator. This has been confirmed by the Examiner’s withdrawal of all previous claim rejections based on Nakamura.

Applicants note that the Examiner cited U.S. Patent No. 3,803,531 (“Sorensen”) in the Notice of References Cited sheet at the end of the Office Action, but did not apply this reference against any of the claims of the present application. Applicants respectfully submit that no further comment regarding this cited but unapplied reference is deemed necessary or appropriate at this time.

On the basis of the foregoing remarks, Applicants respectfully submit that this application is in condition for immediate allowance, and notice to this effect is respectfully requested. The Examiner is invited to contact Applicants' undersigned attorneys at the telephone number set forth below if it will advance the prosecution of this case.

No fee is believed due with this Reply. Please charge any fee deficiency to Deposit Account No. 50-0540.

Respectfully submitted,



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